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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/508,806	09/21/2004	Armin Bernhard	BAW-0010	3944

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EXAMINER	
FLORY, CHRISTOPHER A	
ART UNIT	**PAPER NUMBER**
3762	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/508,806	BERNHARD, ARMIN	
	Examiner	Art Unit	
	Christopher A. Flory	3762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7,8 and 10-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7,8 and 10-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 March 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings were received on 21 March 2007. These drawings are acceptable.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4, 8, 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Ball et al. (US Patent 5,624,376, hereinafter referred to as Ball'376).

Regarding claim 1, Ball'376 discloses a sound receiver from an implantable hearing aid (TITLE; ABSTRACT) comprising an implantable electromechanic transducer which converts the force resulting of an accelerated mass into an electric signal (Figs. 3-5, transducer 100; ABSTRACT); the sound receiver providing a mounting mechanism on at least one of the ossicles in the ossicle chain (abstract; Figs. 8-10; Fig. 5, titanium prongs 52).

Further regarding claim 1, specifically the clause that the sound receiver be rigidly fixed to the malleus or incus, whereby incus and stapes are disconnected so that the incus can move independently from the stapes, the embodiments of Ball'376 shown in Figures 7, 9, 10 and 14 can all be reasonably interpreted as anticipating this claim limitation. In Figures 10 and 14, the sound receiver is clearly shown as being rigidly

attached to the incus MM. Although there is not specifically surgical disarticulation in these embodiments, the incus and stapes are naturally configured to be loosely attached in a swiveling fashion such that they may move independently from one another within the range of that swivel limitation, and thus can be considered "disconnected so as to move independently" by their natural physiological construction. Thus, this clause in the instant application does not add further limitation beyond the natural physiology of the inner ear. Regarding Figure 7 (see also column 10, lines 39-51), Ball'376 discloses an embodiment wherein the incus MM is surgically separated from the stapes HH such that the two would inherently move independently, and the transducer secured around the incus. Regarding Figure 9, a partial prosthetic embodiment, Ball'376 shows the sound transducer 100 connected to the incus MM by way of a prosthetic member 38c. Since member 38c and sound transducer 100 form a singular prosthetic device, sound transducer 100 can reasonably be interpreted as being rigidly connected to the incus since subcomponent 38a is rigidly fixed to both the transducer and the incus. Although it is not a direct connection, it is nonetheless a rigid connection. In this embodiment, the stapes is completely removed from the system. It is very clear that in this case, the incus and stapes are disconnected from one another and are now moving independently.

Regarding claim 2, Ball'376 discloses the floating mass transducer comprising a piezoelectric transducer (ABSTRACT; column 3, lines 24-45).

Regarding claims 3 and 11, Ball'376 discloses the transducer and hermetic housing to be made of biologically compatible material (column 7, lines 30-35; column 8, lines 10-21 and 50-55; column 10, lines 15-25).

Regarding claim 4, Ball'376 discloses a metallic conductive housing (column 8, lines 35-55; column 9, lines 30-35).

Regarding claim 8, Ball'376 discloses a vibratory structure placed inside the housing (ABSTRACT).

Regarding claim 10, the phrase "destined for a cochlea implant" does not provide a positive limitation on the claims, and therefore does not patentably distinguish over the prior art, as any transceiver could be destined for a cochlea implant. Furthermore, the embodiments shown in Figs. 8-10, 14, 18 and 19a of Ball'376 can be considered cochlear implants, because they have the function of enhancing the throughput to the inner ear through the oval window, thus enhancing or augmenting the natural function of the cochlea.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ball'376 in view of Baumann et al. (US Patent Publication 2002/0138115).

Regarding claim 5, Ball'376 discloses the invention substantially as claimed, but does not expressly disclose that the sound receiver further comprise an A/D-converter and an impedance transformer inside the housing. In the same field of endeavor, Baumann et al. teaches an implantable hearing aid with both an A/D converter (Fig. 2, A/D converters 30 and 31; paragraphs [37]-[40]) and an impedance transformer (paragraph [66]). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Ball'376 with the A/D converter and impedance transformer of Baumann et al. to provide the same advantages of more efficiently processing data and amplifying the input voltage.

6. Claims 7 and 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Ball'376 in view of Lesinski et al. (US Patent 5,531,787) and in view of Leysieffer et al. (US Patent 6,398,717).

Regarding claims 7 and 12, Ball'376 discloses the invention substantially as claimed, but does not expressly state that the sound receiver have an entire mass of less than 50 and 30 milligrams respectively. In the same field of endeavor, Lesinski et al. teaches a microsensor with a mass of less than 30 milligrams (column 9, line 50 through column 10, line 7; claim 7). Likewise, in the same field of endeavor, Leysieffer et al. teaches an implant with a total mass of 25 mg on average in order to reduce the forces of inertia upon acceleration by external effects such as impact and vibration and thereby minimize loss of signal in the ossicle chain (column 11, lines 55-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Ball'376 with a mass of less than 30 milligrams as taught in both

Lesinski et al. and Leysieffer et al. in order to provide the Ball'376 system with the same advantages of reducing inertial forces and minimizing signal loss in the middle ear (motivation to combine provided by Leysieffer et al., column 11, lines 55-65). In the alternative, it would have been obvious to one having skill in the art at the time of the invention was made to make a sound receiver with a relatively small mass, such as less than 30 milligrams, since it has been held to be within the general skill of a worker in the art to select known materials and components on the basis of their suitability for the intended use, such as light weight, as a matter of obvious design choice. Since the Ball'376 device discloses each and every one of the structural components of the claimed invention, it follows that one of ordinary skill in the art could select light-weight or miniaturized components and materials to construct a transducer of less than 30 milligrams.

Response to Arguments

7. Applicant's arguments, see paragraphs 2-3 of page 6, filed 21 March 2007, with respect to the objections to the drawings and specification have been fully considered and are persuasive. The objections to the drawings and specification have been withdrawn.

8. Applicant's arguments, see paragraph 6 of page 6 through page 7, filed 21 March 2007, with respect to the rejection(s) of claim(s) 1-4, 8, 10 and 11 under 35 U.S.C. §102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is

made in view of a different interpretation of the previously applied art. Examiner concedes to the Applicant's arguments regarding the complete ossicular prosthesis shown in Figure 8. However, as outlined in paragraph 3 above, the partial prosthesis of Figure 9, as well as several other embodiments of the Ball'376 device, still can be reasonably interpreted to read on the instant claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher A. Flory whose telephone number is (571) 272-6820. The examiner can normally be reached on M - F 8:30 a.m. to 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on (571) 272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/George Manuel/
George Manuel
Primary Examiner

Christopher A. Flory

14 June 2007